

REMARKS

Claims 22 and 29-32 are now pending in the application. Claims 1-21 and 23-28 have been cancelled. New claims 29-32 have been included, which depend on presently amended claim 22. No new matter has been added.

Applicants respectfully requests allowance of the pending claims in view of the amendments and remarks presented herein.

Election/Restrictions

Applicants acknowledge that the Examiner has withdrawn her objection for election of a species of two or more of SEQ ID NOS: 1-10. Applicants respectfully note, however, that the Examiner's reasoning for this appears to be based on a misunderstanding in the Applicants' restriction remarks with traverse. Applicants had remarked here that in their opinion, restriction was not necessary, because a search and examination of the entire application could be made, without serious burden, because the sequences could be viewed as obvious variants of an entire sequence in WO 95/00664, namely SEQ ID No. 1 at Figure 1, which is a sequence that is 1972 nucleotides in length.

Applicants had reasoned that unlike this much larger sequence, the fragments selected in the present invention, comprising various combinations of ten much shorter sequence fragments from the sequence identified in WO 95/00664, each 20 nucleotides in length (see, e.g., paragraphs [0020] to [0023] of the present invention), would be obvious variants for the Examiner to search. Applicants did not intend this to mean that the ten shorter sequences were obvious in light of WO 95/00664 or that various combinations of these ten sequences, which permit, in contrast to WO 95/00664, characterization all of the referenced *Salmonella enterica* subspecies, should be viewed as obvious. In fact, Applicants explained in paragraphs [0056] to [0058] of the present application the particular advantages to selecting and utilizing a much shorter nucleotide sequence, along with nucleic acid hybridization or amplification, to detect these *Salmonella enterica* subspecies. The prior art molecule, which is 1972 nucleotides long and identified in claim 1 of WO 95/00664, for detection and identification of one or more *Salmonella* subspecies, teaches away from using much shorter sequences. The other independent

claims in this art that reference shorter sequences, moreover, fail to indicate that they would be able to detect all of the referenced *Salmonella* subspecies in the present application.

In the interest of furthering prosecution, Applicants have elected to further restrict pending claim 22 by amending it to require at least five nucleic acid molecules selected from a group of five specific sequences that are each 20 nucleotides in length. Claims 23-28 have been canceled, as they were directed to the previously elected set of nucleic acid molecules that comprised a subset of contiguous nucleotides from the ten referenced nucleotide sequences or their complements. Dependent claims 29-32 have been included, which depend on presently amended claim 22. No new matter has been added by these amendments, and support may be found in the present application for this additional restriction, for example, in paragraphs [0007] to [0010], [0058] – [0063], and Table 1a.

Claim Rejections – 35 U.S.C. § 112

Claims 21-28 were rejected under 35 U.S.C. § 112 as allegedly failing to comply with the written description requirement. Applicants have amended the claims to remove the objected language regarding nucleic acid molecules comprising a subset of contiguous nucleotides from the ten referenced nucleotide sequences or their complements. Instead, Applicants amended the claims to refer to nucleic acid molecules comprising specific nucleotide sequences identified by the ten identified sequence numbers of their complements. New claims 29-32 have not been examined but all depend on amended claim 22.

Claim Rejections – 35 U.S.C. § 102

Claim 22 was rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Brennan (U.S. Patent No. 5,474,796). Brennan concerns a method and apparatus for conducting an array of chemical reactions on a support surface. Brennan fails to teach or suggest, however, any of the particular nucleic acid sequences according to the present invention. Anticipation cannot be established simply by presenting an ad hoc collection of elements of “every possible 10 mer nucleic acid sequence” (Office Action, February 22, 2007, at 6), i.e., to establish anticipation, “[t]he identical invention must be shown in as complete detail as is contained in the . . . claim.” See MPEP 2131 and *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236,

9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Brennan fails to meet this standard for Applicants' previously and currently amended claims.

Claims 22-29 were rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Holmes (WO 95/00664). As noted above, the claims have been amended to ten specific fragments, none of which alone or in combination in Holmes, may be used to detect all referenced subspecies of *Salmonella enterica*. Applicants respectfully note that the Examiner remarked in allowance of the parent application that Holmes did not teach or suggest any of these ten specific sequences or their complements for detecting *Salmonella* subspecies. U.S. Patent No. 6,706,472, Notice of Allowability (Aug. 4, 2003) at 2. As such, combinations of at least five of these sequences or their complements cannot have been taught or suggested by Holmes, which claims a much larger sequence in claim 1, let alone in enough detail as to meet above-referenced standard for anticipation of the specifically indicated ten sequences used in combination in the present claims. The Examiner's suggestion that the much larger Holmes sequence inherently contains specific fragments of this sequence is improper in light of the present claim amendments, because Holmes fails to disclose the specific five sequences or their complements, or any combination of the same, as directed in the present invention to detect all referenced subspecies of *Salmonella*. New claim 29 reciting further compositions containing at least 10 contiguous nucleotides of a sequence with a length from 10 to 250 nucleotides selected from five additional specific fragment sequences or their complements is not inherently anticipated, because this requires further modification to the nucleotide acid molecule of claim 22. Support for new claim 29 may be found, for example, in paragraph [0029]. New claims 29-32 have not been examined but all depend on amended claim 22.

Claim Rejections – 35 U.S.C. § 103

Claims 21-28 were rejected under 35 U.S.C. § 103(a) as allegedly obvious over Holmes. Applicants respectfully assert that while Holmes teaches using fragments of the much larger *Salmonella typhimurium* LTR chromosome to identify one or more unnamed subspecies of *Salmonella*, the referenced "fragment" in Holmes is a sequence that is 1972 nucleotides long in contrast to the ten, 20-nucleotides-long fragments referenced in the present invention. Assuming that the nucleic acid molecule comprises five sets of these sequences, for example, the molecule would be in contrast only 100 nucleotides long. One of ordinary skill in the art would not know

to make the specific ten sequences referenced in the present invention, nor that the combination of at least five of these sequences or their complements, could be used to detect all referenced subspecies of *Salmonella*, using hybridization or amplification techniques. Holmes, moreover, does not teach the ten sequences as individual fragments that may be used in combination to detect the claimed subspecies of *Salmonella*.

To the extent that Holmes teaches constructing nucleic acid molecules as primers or probes, Holmes does not teach the specific nucleic acid molecules taught by the present invention, nor the use to detect all referenced subspecies of *Salmonella*. The advantages of the present invention over Holmes to detect the referenced subspecies of *Salmonella* are disclosed, for example, in paragraphs [0005] to [0010] and Example 1. New claims 29-32, which depend on claim 22, are similarly not obvious in view of Holmes.

Claims 21-28 were rejected under 35 U.S.C. § 103(a) over Holmes in view of Hogan (U.S. Patent No. 5,541,308). Applicants assert that these references are overcome for the reasons cited above, and Hogan fails to include a motivation to select the presently claimed combination of at least five of the specifically listed five sequences comprising 20 nucleotides or their complements. The Examiner appears to include Hogan as a reference because it allegedly teaches the use of specific primers or oligonucleotide probes using labeling techniques such as radioisotopes, non-radioactive reporting groups, and non-isotopic materials such as fluorescent molecules. Assuming this, neither Holmes, alone or in combination with Hogan, suggests any of the nucleic acid molecules according to the present invention, which are formed comprising at least five of the five specifically names sequences or their complements. Applicants respectfully assert, moreover, that the Examiner has failed to demonstrate a prima facie case that the primers or probes added to the unique nucleotide molecules claimed in the present invention would be obvious. There is no basis to assert that the mere fact that that primers or probes are used by one of skill in the art would have directed on of ordinary skill in the art to make the requisite ten specific nucleotide sequences, merely 20 nucleotides long, from the 1972-length nucleotide sequence in Holmes, or combine at least five of these sequences or their complements to form the claimed nucleic acid molecule.

Therefore, the claims are not obvious in over Holmes, alone or in view of Hogan. New claims 29-32 have not been examined but all depend on amended claim 22.

Double Patenting

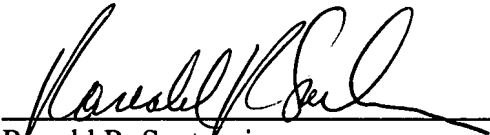
Claims 21-28 were rejected on the ground of nonstatutory obvious-type patenting as being unpatentable over claims 1-9 of U.S. Patent No. 6,706,472. Applicants request that this rejection be held in abeyance until patentable claims have otherwise been allowed.

CONCLUSION

Reconsideration and withdrawal, or modification of the restriction requirement, and a prompt and favorable examination on the merits, is respectfully requested.

Respectfully submitted,
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